IN THE CLAIMS

Claims 1 - 7 cancelled.

8. (Original)   A method for determining whether a tissue is malignant comprising steps of:

(a) irradiating the tissue;

(b) detecting waves reflected by the tissue;

(c) calculating a parameter indicative of a degree of spatial disorder of reflecting members in the tissue based upon the reflected waves; and

(d) comparing the parameter to a predetermined threshold;

the tissue being malignant if the parameter exceeds the predetermined threshold.

9. (Original)   A method for determining whether a tissue is malignant comprising steps of:

(a) irradiating the tissue;

(b) detecting waves reflected by the tissue;

(c) calculating one or more parameters indicative of a degree of spatial disorder of reflecting members in the tissue based upon the reflected waves; and

(d) inputting the one or more parameters into an expert system so as to generate an assessment as to whether the tissue is malignant.

10. (Original) The method according to Claim 9, wherein the expert system is a neural network.

Claims 11 - 17 cancelled.

18. (Original) A system for determining whether a tissue is malignant comprising:

(a) a wave source configured to irradiate the tissue;

(b) a wave detector configured to detect waves reflected by the tissue;

(c) a processor configured to calculate a parameter indicative of a degree of spatial disorder of reflecting members in the tissue based upon the reflected waves.

19. (Original) The system of Claim 18, wherein the processor is further configured to compare the parameter to a predetermined threshold.

20. (Original) A method for determining whether a tissue is malignant comprising steps of:
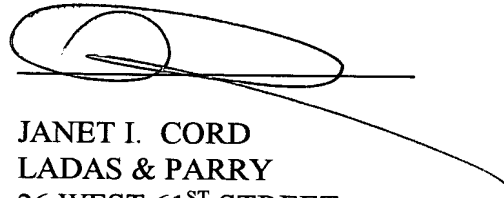
(a) irradiating the tissue;

(b) detecting waves, reflected or scattered by the tissue;

(c) performing an analysis of the reflected or scattered waves;

(d) inputting the results of the analysis into an expert system.

21. (Original) The method of Claim 20, wherein the analysis involves one or more processes selected from the group of:

(a) a Fourier analysis of the complex raw data;

(b) a wavelet analysis of the complex raw data; and

(c) an entropy analysis of the complex raw data.

Claims 22 - 23 cancelled.

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